

ERASMUS MUNDUS JOINT MASTER DEGREE IN FOOD SCIENCE, TECHNOLOGY AND BUSINESS

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ABSTRACT

This Joint Master Degree Project runs under the Erasmus+ Programme of the European Community (Key Action: Learning Mobility of Individual, Action: Student and staff mobility in Joint Master Degrees). The aim of this two-year European Master of Science programme in Food Science, Technology and Business (BiFTec) is to foster innovation and technology in order to cope with future needs and sustainability. The programme is organised in a modular format by three European partner institutions: KU Leuven Technology Campus Gent, Catholic University of Portugal and Anhalt University of Applied Sciences. It is covering on one hand an “as broad as possible” range of food production, processing-related and agribusiness topics, with a horizontal multidisciplinary approach. On the other hand the program is offering a vertical specialisation, with programme units that are teaching state-of-the-art topics dealing with different sectors in food processing, development and business, providing access to performing research in these topics and to professional environments in academia and in industry. Students are required to undertake six compulsory core modules and four optional modules selected from the optional modules listing - organised by the institutes with the most expertise in the particular field. The programme will also require the students to complete a semester of professional competence (a specialisation) and work on a scientific project in one of the partner institutions or in an approved workplace and to submit a thesis. Successful graduates are awarded a joint degree by the three consortium partners.

INTRODUCTION

The current aims of the Joint Master programme action of the Erasmus+ programme find their origin in the European Lisbon Strategy (2000) to develop Europe into a competitive

and knowledge-based economy based on high-quality education by 2020.

Resulting from that decision, the Erasmus Mundus programme was launched more than ten years ago in order to offer master degree education programmes and to realize worldwide mobility of students and scholars. The Erasmus Mundus programme (and its side-effects such as the organisation of European Higher Education Fairs worldwide to attract highly qualified master students) has opened up the world to European higher education institutions.

With the launching of the Erasmus+ programme the Erasmus Mundus action was transformed and updated into the “joint master programme”, with added points of attention such as the employability of the graduates (Erasmus+ Programme Guide).

The European Joint Master in Food Science, Technology and Business aims of implementing exactly the EU priorities of attracting third country students and staff, increasing the visibility of European higher education, developing a joint degree with a consortium of EU partners and worldwide associate partners and addresses all the priorities as formulated in the Erasmus+ programme guide: (a) Joint master programmes of excellent quality offered by a consortium of universities to attract the very best students worldwide; (b) Foster quality improvements, innovation, excellence, internationalisation in HEIs; (c) Increase quality and attractiveness of the EHEA, supporting the EU external policy; (d) Improve the level of competences and skills of master graduates in particular their relevance for the labour market through increased involvement of employers (employability).

This paper further describes the consortium partners, programme integration, its objectives, structure and design, funding mechanisms and gives an overview of career perspectives of the future graduates. Sustainability strategy has also been outlined and discussed as one of the main priorities of the consortium partners.

THE CONSORTIUM PARTNERS

KU Leuven

Founded in 1425, the University of Leuven (KU Leuven) has been a centre of learning for almost six centuries. Today, it is Belgium's largest and highest-ranked university as well as one of the oldest and most renowned universities in Europe. As a leading European research university and co-founder of the League of European Research Universities (LERU), KU Leuven offers a wide variety of programmes in English supported by high-quality interdisciplinary research. Boasting an outstanding central location in the heart of Europe, KU Leuven offers a truly international experience, high-quality education, world-class research and cutting-edge innovation.

Anhalt University of Applied Sciences (HS Anhalt)

HS Anhalt is situated in central Germany, a region with a very well-developed agriculture and food industry. In the tradition of previous universities, Anhalt University started its activities in 1992. The direct route to career success in the heart of central Germany is particularly compelling because it systematically brings together science and innovation in Bernburg, Dessau and Köthen. The university offers innovative teaching and research at international level and with international study quality and quality of life.

Catholic University of Portugal (UCP)

UCP was established in 1967 and rapidly gained a solid reputation for its high quality teaching and the strength of its research, for the fruitful debates that it encourages, and for its focus on internationalisation. Within the Portuguese Higher Education system, UCP distinguishes itself by means of the values expressed in its name; a worldview that is open to the future and to intercultural dialogue in a wide range of areas of knowledge – in degree, master's and doctor's courses, diploma courses and lifelong learning.

THE JOINT MASTER DEGREE

Programme integration

BiFTec is truly integrated from the very beginning due to the long lasting cooperation mechanisms developed between the consortium partners. Additionally a cooperation with other institutions acting as associated partners has been established: University of Auckland in New Zealand, Michurinsk State Agricultural University in Russia, Iowa State University, the USA, Agricultural University in Krakow, Poland, University of Perugia, Italy, Technical University of Berlin, Germany, Marketing Pool Ernährungswirtschaft, Germany (Food Industry Association). The proposed European Master of Science in Food Science, Technology and Business (BiFTec) is an integrated programme, which is managed by a common management structure between the organising universities. Each partner possesses an expertise in a relevant specific

field and thereby will be responsible for offering selected modules from the offer of 15 different modules in total (5 modules per partner). Additionally each partner will be able to host students over their second year for placement and/or thesis – depending on the individual interests of the students. The curriculum design is the result of fully collaborative activities, which help to ensure that there is consistency across the modules and avoids the risk of overlap between modules, regardless of where the student will study. Further integration aspects include the governance structures, degree of recognition, degrees awarded and qualification supplements issued, ECTS mechanisms used, common standards for application and selection for admission, common tuition fees, participation costs, and the scholarship policy.

Programme objectives

The food industry is a complex, global collective of diverse businesses that supply much of the food and food energy consumed by the world population.

The MSc in Food Science, Technology and Business aims to provide graduates with the skills to analyse the key issues impacting on an evolving food chain such as changing consumer demand, the need for better value, the emerging food service markets, food supply chain management, food safety, product development and innovation, and the application of those skills to the food industry. Through the comprehensive coverage of the whole food chain – and its impact on food availability, accessibility and security, we are able to take a multi-disciplinary approach in providing students also with the full range of legal issues they encounter across the industry, from trade and other regulatory matters such as the rules governing supply managed commodities, temporary marketing authorizations, food import procedures, food related security, requirements to the health and safety aspects of manufacturing, processing and distributing, as well as matters that arise in the marketing of food and beverage products, such as branding, labeling and advertising.

In the light of the increasing globalisation in food production, processing and consumption, the project group considers that the joint master degree programme with a specific integrated and international outlook fills an increasing need and will result in the transfer of knowledge, experience and standards to developing countries.

Programme design and structure

The BiFTec course is scheduled over two academic years and will result in the accumulation of 120 ECTS. They are organised in the following basic structure: (a) 10 modules over first year of 4-8 ECTS each to reach 60 ECTS in total, (b) A semester of professional competence module in a specific subject area - 30 ECTS, (c) A semester of Thesis/project work - 30 ECTS. The specific modules are offered by the partners with the most expertise in the relevant field as shown in the Table 1.

Table 1: Programme structure

PROGRAMME		
MODULE	ORGANISING INSTITUTION	ECTS
STAGE 1		
Compulsory modules		
Food Biotechnology	KU Leuven	6
Food Safety and Quality Management	KU Leuven	8
Process Management and Product Development	KU Leuven	4
Environmental Practices and Sustainability	UCP	6
Business and Economics in Food Industry	HSA	6
Innovations in Food Engineering and Technology	HSA	6
Optional modules (to select 4)		
Malt and Beer Production	KU Leuven	6
Distilled Spirits Technology	KU Leuven	6
Wine Production	UCP	6
Fats and Oils	UCP	6
Fruits and Vegetables	UCP	6
Food Packaging, Materials, Systems and Technology	UCP	6
Meat and Meat Products	HSA	6
Cereals and Cereal Products	HSA	6
Dairy Science and Technology	HSA	6
STAGE 2		
Professional competence module	Consortium partners	30
Thesis	Consortium partners	30

Scholarships

The programme has been selected for funding in the 2015 call for proposal with a budget of €2.779.000. Erasmus+ scholarships will be awarded to top applicants from all over the world for three consecutive intakes, until and including the intake for the academic year 2018/2019. The full scholarship covers tuition fees, full insurance, and part of costs for travelling, housing, and living for the entire duration of the study programme. The full scholarship amounts up to €47,000 for non-EEA citizens and up to €34,000 for EEA citizens.

Scholar grants will be awarded to selected researchers and/or lecturers wishing to contribute to the delivery of the programme (for a minimum duration of stay of 1 week). The scholar grant will cover both travel/installation contribution and working fees.

Career perspectives

The BiFTec programme prepares competent employees for sectors including food production, processing and agribusiness as well as for industry and academia. Approximately 90% of the graduates of the preceding Master of Science in Food Science, Technology and Nutrition - Sefotech.Nut course run from 2006 till 2016 are getting full employment resulting from an ample number of job applications and within a reasonable application time of six months. The academic level of the Master's course is being proved by the ability of approximately 10% of graduates who continue their studies at third level making a PhD (Self-evaluation report, Sefotech.Nut).

It is estimated to obtain similar rates with the BiFTec programme based on the characteristics proving its orientation towards the working field: •An academic curriculum offering the realization of general professional competences; •An academic curriculum in a well-defined sector of industrial activity; •An academic curriculum relying on contacts with and contribution of industry; •An academic curriculum offering the possibility for practical placement in the working field; •Contact with industry by internal master thesis subjects; •Contact with industry by external master thesis subjects; •Teaching activities provided by visiting academic lecturers from industry; •An academic curriculum leading easily to full employment.

Sustainability

Sustainability strategy considers two aspects that need to be addressed: the costs of sustaining the consortium and the costs of delivering the programme to students. Due to the strong consortium commitment and integration, the partners already achieved institutional embedding of the programme and secured commitment for human, material and administrative resources from the respective institutions. The consortium partners are however aware that additional sources of funding must be secured in order to make the programme sustainable beyond the EU funding. The strategic plan includes a number of opportunities that have been identified: •Attracting self-supporting students (extended promotion of the programme and assistance to students in minimising living expenses and overheads); •Partial scholarships funded by the Consortium; •Tuition fee waivers for best students; •External scholarships; •Industrial funding; •Ministerial subsidies; •Possibility to take selected modules only as a part of the Continuous Professional Development. It is believed that these strategies combined will bring the expected results.

More information can be found at www.biftec.org

ACKNOWLEDGMENTS

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Self-evaluation report, Sefotech.Nut (2010)

WEB REFERENCES

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